Harvard's George Church: CRISPR could give us pig-to-human organ transplants within 2 years

In a bold scientific step that helps open the door to organ transplants from animals, researchers at Harvard and a private company have created gene-edited piglets cleansed of viruses that might cause disease in humans.

The advance, reported … in the journal Science, may make it possible one day to transplant livers, hearts and other organs from pigs into humans, a hope that experts had all but given up.

There were 33,600 organ transplants last year, and 116,800 patients on waiting lists, according to Dr. David Klassen, chief medical officer at the United Network for Organ Sharing…

If pig organs were shown to be safe and effective, "they could be a real game changer," said Dr. Klassen, who was not involved in the new study. Dr. George Church of the Harvard group now says the first pig-to-human transplants could occur within two years.

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Dr. Church and his colleagues thought the retrovirus question could be resolved with Crispr…They took cells from pigs and snipped the viral DNA from their genomes. Then the scientists cloned the edited cells.

Each pig cell was brought back to its earliest developmental stage and then slipped into an egg, giving it the genetic material to allow the egg to develop into an embryo. The embryos were implanted in sows and grew into piglets that were genetically identical to the pig that supplied the initial cell.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: Gene Editing Spurs Hope for Transplanting Pig Organs Into Humans